

CLAIMS:

1. A method of processing a signal using a digital signal processor having a given word length, the method comprising the step of pre-processing said signal using a pre-processor which reduces the word length and performs an operation which is invariant with respect to the process being performed by the digital signal processor.

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2. A method as claimed in claim 1, wherein said process being performed by the digital signal processor is watermark detection, and the pre-processor is a high-pass filter.

10 3. A method of processing a signal received in the form of signal samples having a range of sample values, the method comprising the steps of filtering the signal to reduce the range of signal sample values in a given band of non-interest, and digitally processing the filtered signal using integer arithmetic.

4. A digital signal processor comprising:
15 – input means for receiving a signal in the form of integer signal samples having a range of sample values;
– filtering means to reduce the range of signal sample values in a band of non-interest;
– a digital signal processing circuit for digitally processing the filtered signal using integer arithmetic.

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5. A processor as claimed in claim 4, wherein said digital processing circuit comprises a transform circuit for transforming the signal into frequency coefficients.

25 6. A processor as claimed in claim 3, wherein said correlation circuit includes a Fourier transform circuit for computing said correlation for a plurality of shifts between said signal and said predetermined watermark pattern.